

FEATURES:

- IP65
- Program LPConfig
- HCL14 Programmer
- Linear char.

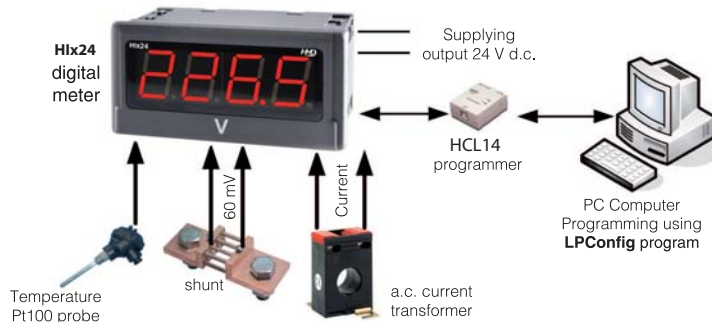


- Destined for measurement of d.c. voltage or d.c. current, temperature through Pt100 resistance thermometers, J, K thermocouples, a.c. voltage and a.c. current.
- 4 LED digit displays with 20 mm digit high.
- Parameters programmable by HCL14 programmer:
 - precision of displayed results (decimal point),
 - measurement averaging time,
 - recounting of indications (individual characteristic),
 - automatic or manual compensation: cold junction temperature for measurement with thermocouples or wire resistance for measurement with Pt100 (HIT24).

INPUTS:

- AC
- DC
- 20...20 mA
- 10...10 V
- 60 mV

EXAMPLE OF APPLICATION



- Measurement and display:
- temperature
 - analog signals
 - d.c. current and voltage
 - rms current and voltage.

OUTPUTS:



GALVANIC ISOLATION:

- HCL14 Programmer
- Sup.

INPUTS

Type	Measuring ranges	Parameters	Overloads	Errors
HIP24	-11 mV...-10 mV...60 mV...66 mV	Input resistance >1 MΩ	Short duration overload (1s): - voltage input: 10 Un - current input: 5 In Sustained overload: 110% Un, 110% In	Basic error: ± (0.2% of range + 1 digit) Additional error from ambient temperature changes: ± (50% of basic error/10K)
	-66 mV...-60 mV...60 mV...66 mV			
	-0.5 V...0 V...10 V...11 V			
	-11 V...-10 V...10 V...11 V			
	-1 mA...0 mA...20 mA...22 mA			
	3.6 mA...4 mA...20 mA...22 mA	Input resistance 10 Ω ±1%		
HIT24	Pt100	-50°C...150°C	Short duration overload (1s) Input of sensors: 30 V	Basic error: ± (0.2% of range + 1 digit) Additional errors: • compensation of cold junction temperature changes: ± 0.2% of range, • from ambient temperature changes: ± (50% of basic error/10K).
		-50°C...400°C		
	Thermocouple J	-50°C...1200°C		
	Thermocouple K	-50°C...1370°C		
HITC24	1...100...120 V a.c.	Input resistance > 2 MΩ	Short term overload (1s): voltage input: 2 Un (< 1000V), current input: 10 In Sustained overload: 150% Un (for 400 V input), 120% (for remaining inputs), 120% In	Basic error: • voltage and current: ± (0.5% of range + 1 digit) in frequency range 20...500 Hz • frequency: ± (0.02% of range + 1 digit) Additional error from ambient temperature changes: ± (50% of basic error/10K)
	2.5...250...300 V a.c.			
	4...400...600 V a.c.			
	20...500 Hz (in voltage range: 24...480 V)			
	0.01...1...1.2 A a.c.			
	0.05...5...6 A a.c.	Input resistance 2 mΩ ±10%		
HITCC24	0...100...110 V d.c.	Input resistance > 2 MΩ	Short term overload (1s): voltage input: 2 Un (< 1000V), current input: 10 In Sustained overload: 150% Un (for ± 400 V input), 120% (for remaining inputs), 120% In	Basic error: ± (0.2% of range + 1 digit) Additional error from ambient temperature changes: ± (50% of basic error/10K)
	0...250...275 V d.c.			
	-120...-100...100...120 V d.c.			
	-300...-250...250...300 V d.c.			
	-600...-400...400...600 V d.c.			
	-1.2...-1...1...1.2 A d.c.			
	-6...-5...5...6 A d.c.			
	Input resistance 10 mΩ ±10%			
	Input resistance 2 mΩ ±10%			

OUTPUTS

For HIP24 and HIT24	Output for supply external transducers	24 V ± 5%, 30 mA
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EXTERNAL FEATURES

Weight	< 0.25 kg	
Overall dimensions	96 x 48 x 64 mm (with terminals)	
Protection grade (acc. to EN 60529)	ensured by the housing: IP65	from the terminal side: IP 20
Display	4-digit LED display, 20 mm high, red colour	indication range: -1999...9999

RATED OPERATING CONDITIONS

Supply voltage	230 V ± 10% a.c. (45...65 Hz); 110 V ± 10% a.c. (45...65 Hz) 24 V ± 10% a.c. (45...65 Hz); 85...253 V a.c. (40...400 Hz) or d.c.; 20...40 V a.c. (40...400 Hz) or d.c.	input power consumption: 6 VA
Temperature	ambient: -10...23...55 °C	storage: -25...85 °C
Relative humidity	≤ 95%	condensation inadmissible
Operating position	any	
Preheating time	30 min	
Averaging time	≥ 0.5 s	1 second default set

SAFETY AND COMPATIBILITY REQUIREMENTS

Electromagnetic compatibility	noise immunity	acc. to EN 61000-6-2
	noise emissions	acc. to EN 61000-6-4
Isolation between circuits	basic	acc. to EN 61010-1
Pollution grade	2	
Installation category	III (for the 400 V option - category II)	
Maximal phase-to-earth operating voltage	for supply circuits: 300 V, for measuring circuits: 600 V - cat. II for other circuits: 50 V	
Altitude above sea level	< 2000 m	

CONNECTION DIAGRAMS

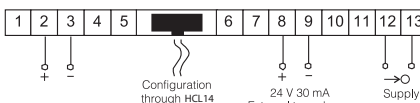


Fig. 1. Electrical connections of the HIP24 meter

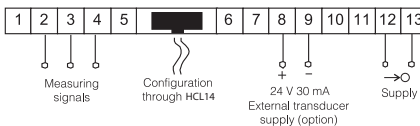


Fig. 2. Electrical connections of the HIT24 meter.

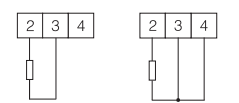


Fig. 3. Connections of HIT24 measuring inputs

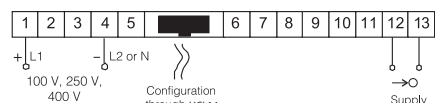


Fig. 4. Electrical connections of HITC24 and HITCC24 meters for the measurement of voltage (and frequency only in HITC24)

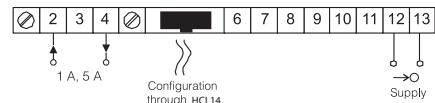


Fig. 5. Electrical connections of HITC24 and HITCC24 meters for the current measurement

ORDERING

TABLE 1. ORDERING CODES:

	HI24	X	X	X	XX	XX	X	X
Input kind:								
standard: voltage, current		S						
temperature: thermocouples, resistance thermometers		T						
a.c. signals		Z						
d.c. signals: high voltage and high current		H						
Input: see table 2		X						
Supply:								
230 V a.c.								1
110 V a.c.								2
24 V a.c.								3
85...253 V a.c./d.c. with supply output 24 V/30 mA*								4
20...40 V a.c./d.c. with supply output 24 V/30 mA*								5
Unit: see table 3								XX
Version:								
standard								00
non-standard settings								NS
custom-made**								XX
Language:								
Polish								P
English								E
other**								X
Acceptance tests:								
without extra requirements								0
with an extra quality inspection certificate								1
acc. to customer's request**								X

* - The output is only in HIP24 and HIT24 meters
** - After agreeing with the manufacturer

TABLE 2. INPUT SIGNALS

Nr	HIP24	HIT24	HITC24	HITCC24
1	0...20 mA	Pt100: -50...150 °C	100 V a.c.	±100 V d.c.
2	4...20 mA	Pt100: -50...400 °C	250 V a.c.	±250 V d.c.
3	0...60 mV	Thermocouple J	400 V a.c.	±400 V d.c.
4	0...10 V	Thermocouple K	1 A a.c.	±1 A d.c.
5	± 60 mV		5 A a.c.	±5 A d.c.
6	± 10 V		20...500 Hz	0...100 V d.c.
7				0...250 V d.c.

TABLE 3. CODES OF PRINTED UNITS:

Code	Unit	Code	Unit	Code	Unit
00	without unit	06	mA	12	bar
01	°C	07	kA	13	kPa
02	%	08	kV	14	MPa
03	A	09	Hz		
04	V	10	turns	XX	on order
05	mV	11	rpm		

TABLE 4. EXAMPLE OF NON-STANDARD SETTINGS:

Parameter	Range/Value
Decimal point	000,0 for I, U
Averaging time	1 s
Upper measurement overflow	9999
Lower measurement overflow	-1999
Individual characteristic	enabled
Parameter a of the individual characteristic	5
Parameter b of the individual characteristic	0

Order example 1 :

The code HITC24-2 1 04 00 E 0 means
HITC24 - digital meter for a.c. signals
2 - input: 250 V a.c.
1 - supply: 230 V a.c.
04 - unit: V
00 - standard version
E - English language
0 - without extra requirements

Order example 2 :

The code HIP24 - 14 02 NS E 1 means:
HIP24 - digital meter for d.c. signals
1 - input: 0...20mA
4 - supply: 85...253 V a.c. with supply output:
24V/30mA
02 - unit: %
NS - non-standard settings, display range:
0...100.0
E - English language
1 - with an extra quality inspection certificate

SEE ALSO:

PROGRAMMABLE TRANSDUCER



HCU12

TRANSDUCER SUPPLIED FROM A CURRENT LOOP



HC15

DIGITAL PANEL METER



HI20

MICROPROCESSOR CONTROLLER



HR20



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